



NYU

**ROBERT F. WAGNER GRADUATE
SCHOOL OF PUBLIC SERVICE**

HPAM – GP 4830.002 Health Economics: Principles Spring 2022

Instructor Information

- Laura Wherry
- Email: laura.wherry@nyu.edu
- Office Address: Puck, Room 3008
- Office Hours: Virtually, by appointment on Thursdays between 10-11:30am. Sign up using Google calendar at this [link](#).

Course Information

- Class Meeting Times: Wednesdays, 1/26 – 3/9, 4:55 pm – 6:35 pm

Course Prerequisites

- Microeconomics, Statistics I
- Proficiency in Excel expected.

Course Description

The purpose of this course is to extend students' understanding of economic theory and empirical research in key areas of health economics and enable students to leverage that knowledge and apply it to timely issues in health policy and management.

Competencies

This course will address the following CAHME competencies:

- The ability to understand how policy and delivery processes work, and to consider the demographic, cultural, political and regulatory factors involved in and influencing health policy and management decision-making.
[This competency will be assessed through Assignment 1, which examines social determinants of health and Assignment 2, which examines NYC's sick leave law.]

- The ability to synthesize evidence, and apply statistical financial, economic and cost-effectiveness tools/techniques in organizational analysis.
[This competency will be assessed through Assignment 5, in which students will be required to apply cost-effectiveness analysis tools.]
- The ability to present convincingly to individuals and groups the evidence to support a point of view, position or recommendation.
[This competency will be assessed through Assignment 3, in which students will be required to support a policy or management position.]
- The ability to communicate and interact productively (via listening, speaking and writing) on matters of healthcare with a diverse and changing industry, work force and citizenry.
[This competency will be assessed through Assignments 2 and 4, in which students will be required to write policy and management memos.]

Assignments, exams, and class participation in the course will assess progress against these competencies, and no student will receive a B or higher without demonstration of satisfactory progress towards mastery of each competency.

Course and Learning Objectives

Learning Assessment Table

Program Competency	Corresponding Course Learning Objective	Corresponding Assignment Title (Memo, Team Paper, Exam, etc.)	Denote Level of Competency Expected to Achieve via the Assignment (basic = 1, intermediate = 2, advanced = 3)
The ability to understand how policy and delivery processes work, and to consider the demographic, cultural, political and regulatory factors involved in and influencing health policy and management decision-making.	Be able to apply economic theories to understanding the social determinants of health and the impact of policy.	Assignment #1, #2	2
The ability to synthesize evidence, and apply statistical financial, economic and cost-effectiveness tools/techniques in organizational analysis	Be able to conduct a basic cost-effectiveness analysis of a health program.	Assignment #5	1

<p>The ability to present convincingly to individuals and groups the evidence to support a point of view, position or recommendation.</p>	<p>Be able to use evidence to make policy recommendations.</p>	<p>Assignment #4, #6</p>	<p>2</p>
<p>The ability to communicate and interact productively (via listening, speaking and writing) on matters of healthcare with a diverse and changing industry, work force and citizenry.</p>	<p>The ability to communicate and interact with a team to develop a policy memo.</p>	<p>Assignment #2, #4</p>	<p>2</p>

Late Assignment Policy

Extensions will be granted only in case of emergency, out of respect to those who abide by deadlines despite equally hectic schedules. Late submissions without extensions will be penalized 10% per 24-hour period.

Requirements

- Please do all required readings before class and be prepared to discuss the policy reading assigned each week. To reinforce these readings, you are expected to answer the weekly preparatory True/False questions on NYU Brightspace.
- Assignments (65% of grade – 10%, 15%, 15%, 15%, 10%)
- Final exam – (30% of grade) – online – March 10-13
- Weekly preparatory problems – 5% of grade (graded as complete/incomplete)

Required Text

- Title: Health Economics
- Authors: Jay Bhattacharya, Peter Tu, Timothy Hyde
- Publisher: Palgrave Macmillan, 2013
- ISBN: 113702996X, 9781137029966

Assignments

All papers are to be submitted via the NYU Brightspace course site as WORD documents at least 1 hour before the start of class on their due date (3:55 pm). Be sure your name is part of the document file name.

Grading

- Preparatory T/F questions for each lecture are graded as completed/not completed.
- Instructions for specific assignments are listed below. Please follow word count and format instructions for each assignment.

COVID-Related Policies

- If you need to miss class for COVID-related reasons or other emergencies, please let me know in advance if possible. Relevant course materials will be shared on NYU Brightspace, and a link to a class recording will be made available.
- In the event that the course needs to be offered entirely online for a particular class meeting, we will meet synchronously at the standard class time using Zoom. Additional instructions about particular details of class meetings or work will be emailed to you in the event of a shift to online instruction.

Detailed Course Overview

Session 1: January 26, 2022

Demand for Health, Health Production

Objectives:

- Understand how economic models can be used to structure thinking around health policy and management issues
- Be able to use Grossman's model of the production of health to analyze issues
- Become familiar with the literature on the relationship between income and health
- Learn approaches to addressing causal inference

Readings:

- WATCH all the videos <https://mru.org/courses/principles-economics-microeconomics/consumer-choice-optimization-marginal-utility> (Introduction, Budget Constraints, Indifference Curves, Consumer Optimization) [you can watch them at double speed if you are already familiar with this material]
- Review Microeconomics lectures Weeks 5 and 8
- Textbook, Chapters 1, 3, 4 (plus the T/F questions)
- These two articles summarize a lot of interesting economics research. Read them as background

information.

- Jack, W. (2011) [The Promise of Health: Evidence of the Impact of Health on Income and Well-Being](#) in S. Glied & P.C. Smith, Oxford Handbook of Health Economics. USA: Oxford University Press.
- Cutler, D. et al. (2006) “[The Determinants of Mortality](#),” The Journal of Economic Perspectives, 20(3): 97-120.

Policy Issue: Income and life expectancy:

- Lowrey, Annie, 2014, “[Two Counties, Separated by Fortune](#),” *New York Times*, March 15, 2014.
- LaVeist, T., Pollack, K., Thorpe Jr, R., Fesahazion, R. and Gaskin, D., 2011. [Place, not race: disparities dissipate in southwest Baltimore when blacks and whites live under similar conditions](#). *Health Affairs*, 30(10), pp.1880-1887.

Homework Assignment 1 (10% of final grade; maximum 150 words, due before class on February 2, Bullet point style is fine.):

Lowrey’s article suggests that socioeconomic differences between Fairfax County, Virginia and McDowell County, West Virginia are a source of the mortality differences between the two areas. Tying your analysis as closely as possible to the Grossman model and to the situation described in the story, provide **two** specific mechanisms through which socioeconomic differences between these counties could be an explanation of the mortality difference and explain that link using the Grossman model’s structure.

RUBRIC	1	2	3	4	Total points possible
Overall coherence	Restates article	Relates to Grossman model	Explains how article connects to model	Ties argument together	4
First mechanism	Identifies a proximate cause	Describes cause as an input into the production of health	Explains how this input affects the choice of how to produce health or how much health to produce	Careful analysis that draws in both social determinants and proximate causes	4
Second mechanism	SAME				4

Application of Grossman model	Uses Grossman's terms and mentions social determinants	Uses Grossman's model but rephrases in lay terms			2
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Session 2: February 2, 2022

Demand for Health – Demand for Immunizations -- Infectious disease, Externalities

Deliverables:

- Assignment 1 due before start of class!

Objectives:

- Become familiar with the problems of externalities in health
- Understand basic models of infectious disease transmission

Readings:

- Review Microeconomics Lecture 13
- Textbook, Chapters 20 and 21 (plus the T/F questions)
- Laxminarayan, R., and A. Malani, 2011, "[Economics of Infectious Diseases](#)," in Oxford Handbook of Health Economics, edited by S. Glied and P.C. Smith (New York: Oxford University Press). ONLY Abstract, Sections 9.1, and 9.2. Come prepared to discuss why economists might be more skeptical of the gains from voluntary testing than epidemiologists are.

Optional:

- Gupta, Sumedha, Kosali Ilayperuma Simon, and Coady Wing. "Mandated and Voluntary Social Distancing During The COVID-19 Epidemic: A Review." *NBER Working Paper* w28139 (2020). [p. 20-24 only, https://www.nber.org/system/files/working_papers/w28139/w28139.pdf](https://www.nber.org/system/files/working_papers/w28139/w28139.pdf)

Homework Assignment 2 – Individual (15% of final grade; maximum 500 words, due before class on February 9)

Use Grossman’s model of the production of health to develop a plausible hypothesis how NYC’s new sick leave law is likely to affect emergency room use. Use the articles on the NYU Brightspace site to provide evidence in support of your hypothesis.

Tips:

- Be concise! Don't throw in extra information.
- There are (at least) three ways that sick leave could affect the use of emergency rooms. Be sure to explain all of channels and note why one of them is probably more important than the others. When applying the Grossman model itself, do not use graphs or technical notation. Use your own words and write in terms sensible for a layperson. Imagine that you are writing to the mayor or to the chair of an emergency department.
- The new NYC policy will change the cost of time spent sick, the cost of certain preventive care (delivered by a doctor), and the cost of certain kinds of care received when you are sick. (Remember that not all prevention requires doctors and that not all illness can be prevented.)

RUBRIC	1	2	3	Total points possible
Overall coherence of argument	Restates Grossman model	References readings	Clear and compelling argument using readings	3
Each of three mechanisms	Notes mechanism	Explains how mechanism operates within model and changes health	Explains how mechanism relates to ER use	3
Data	Analyzes data partially	Analyzes data correctly	Integrates data into answer	3

Session 3: February 9, 2022

Demand for health – demand for medical care – demand for health insurance -- adverse selection

Deliverables:

- Assignment 2 due before start of class.

Objectives:

- Understand the sources of demand for health insurance

- Be able to apply the idea of utility maximization to potential states of the world

Readings:

- Review Microeconomics Week 12
- Textbook, Chapters 7, 8, 9, 10 (plus the T/F questions)
- Play the adverse selection game (available on the Brightspace website)

Policy Issue: Voluntary Insurance

- Chandra, A., Gruber, J., & McKnight, R. (2011). [The Importance of the Individual Mandate — Evidence from Massachusetts](#). *New England Journal of Medicine*, 364(4), 293-295.
- Geruso, Michael, and Timothy J. Layton. "[Selection in Health Insurance Markets and Its Policy Remedies](#)." *Journal of Economic Perspectives* 31, no. 4 (2017): 23-32, 45-47.

Homework assignment 3 - (draft due February 16 – ungraded – must be handed in before class or assignment 4 grade will be docked 5 points)

Insurance coverage sold in the Affordable Care Act (ACA) marketplaces for non-group insurance must cover a set of essential health benefits and premiums may not reflect individual health status. Some people would like to expand the range of options available to people, including by allowing the sale of renewable, experience-rated short-term health insurance plans, which need not cover the full set of essential health benefits

You are assigned to a group, and as a group you should prepare to explain—using the Rothschild-Stiglitz model—how this change would likely affect the insurance market and who would gain or lose from this change. The Geruso-Layton article will be helpful. Groups should prepare for discussion ahead of the next session. By the end of next session, your group should prepare and submit a 300- to 500-word memo summarizing the findings for a group grade.

Session 4: February 16, 2022

Adverse selection

Deliverables:

- Hand in draft.

Objectives:

- Understand strategies for addressing adverse selection
- Be familiar with the model of efficient moral hazard

Readings:

- Glied, S. & Remler, D. (2002). [What Every Public Finance Economist Needs to Know about Health Economics](#). *National Tax Journal*, 55(4), 771-777, 779-782.

Policy Issue: Responding to Adverse Selection

- [Ian Duncan: Applications of risk adjustment in health care](#) [home page and first 5 minutes]

Homework assignment 4 – (Group paper due February 23 – 15% of grade- maximum 500 words, due before class). Assignment 3 question.

Rubric	1	2	3	Total points possible
Description of the change examined	Description present and clear			2
Consumers who would benefit from this change are described in detail	Points to a group	More precisely delineates the characteristics of this group	More detail	3
R-S Model is applied	Cursory model application	Discussion of the model is integrated into the paper		2
G-L is discussed	Cursory application	Integrated into the paper		2
Discussion of how this will affect the insurance market	Cursory discussion	Explanation of how market will change in more detail	More detail	3
Discussion of the winners and losers	Identification of winners and losers	Detailed discussion of who will win AND WHY	Discussion considers both short run and long run	3

Session 5: February 23, 2022

Cost-effectiveness Analysis Economic Evaluation of Health Interventions

Deliverables:

- Assignment 4 due before start of class.

Objectives:

- Understand the basic methods of economic evaluation of health interventions
- Recognize the difference between cost-saving and cost-effective
- Be able to discuss the problems of cost-effectiveness analysis

Readings:

- Please watch the following video: [How Much Risk are you Willing to Take?](#)
- Textbook, Chapter 14 – 14.1-14.4 (plus the T/F questions)
- ALL STUDENTS: PLEASE READ AND BE PREPARED TO DISCUSS:
Weinberger, Eric (2014), “The Governor is Very Interested.” Teaching Case from the Strategic Training Initiative for the Prevention of Eating Disorders. (ON BRIGHTSPACE)
- [Guide to Analyzing the Cost-Effectiveness of Community Public Health Prevention Approaches](#) (2006), Chapters 1-2 (pp. 1.1-1.3, 2.1-2.9), Chapters 4-5 (pp. 4.1-4.7,5.1-5.11).

STUDENTS WITH LAST NAME ENDING A-L: PLEASE READ AND BE PREPARED TO PRESENT AND DISCUSS

- Kohli, Michele, Michael Maschio, Debbie Becker, and Milton C. Weinstein. "[The potential public health and economic value of a hypothetical COVID-19 vaccine in the United States: Use of cost-effectiveness modeling to inform vaccination prioritization.](#)" *Vaccine* 39, no. 7 (2021): 1157-1164.

Be prepared to answer:

- What is the question under study?
- Where are the data from?
- What key assumptions are made?
- Do you agree with the assumptions?
- What is missing?

STUDENTS WITH LAST NAME ENDING M-Z: PLEASE READ AND BE PREPARED TO PRESENT AND DISCUSS

- Losina, Elena, Valia Leifer, Lucia Millham, Christopher Panella, Emily P. Hyle, Amir M. Mohareb, Anne M. Neilan, Andrea L. Ciaranello, Pooyan Kazemian, and Kenneth A. Freedberg. "[College campuses and COVID-19 mitigation: clinical and economic value.](#)" *Annals of internal medicine* 174, no. 4 (2021): 472-483.

Be prepared to answer:

- What is the question under study?
- Where are the data from?
- What key assumptions are made?
- Do you agree with the assumptions?
- What is missing?

Homework assignment 5 – (Group assignment, 15% of grade -- Cost-effectiveness analysis available on NYU Brightspace. Due by start of class on March 2).

RUBRIC	1	2	Total possible points
Table 1	At least 2 correct entries in columns 1 and 2; at least 1 in column 3	At least 3 correct entries in column 1; at least 2 in column 2, at least 1 in column 3	2
Table 2.1	Sums are correct except for minor addition errors		1
Table 2.2	Sums are correct except for minor addition errors		1
Table 3	Life expectancy OR QALYs correct or close	Both correct or close	2
Table 4 – Incremental cost to Payers	At least one calculation correct	All calculations correct	2
Table 4 – Incremental Social cost	At least one calculation correct	All calculations correct	2
Table 4 – Incremental effectiveness	At least one calculation correct	All calculations correct	2
Table 4 – Payer ICER	At least one calculation correct	All calculations correct	2
Table 4 – Societal ICER	At least one calculation correct	All calculations correct	2
Memo – background and goals	Defined		1
Categories of costs included	Described with brief explanation	Discussion of costs of alternatives	2
QALY calculation	Described with brief explanation	Discussion of QALY benefits of alternatives	2
ICER calculation	Described with brief explanation		1
Length of calculation	Described	Discussion of why effects are modified	2
Conclusions	Summary	At least one limitation noted	2

Session 6: March 2, 2022

Moral Hazard-What Services Should Health Insurance Cover?

Deliverables:

- Assignment 5 due before start of class.

Objectives:

- Understand the use of randomized experiments in health economics
- Recognize the welfare losses associated with moral hazard

Readings:

- Textbook, Chapters 2 and 11 (plus the T/F questions)
- Manning, Willard G., and others, 1987, "[Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment](#)," *American Economic Review* 77(3): 251-277.
- Lagarde, Mylène, and Natasha Palmer. "[The impact of user fees on access to health services in low-and middle-income countries](#)." *Cochrane Database of Systematic Reviews* 4 (2011).
Abstract and Plain Language Summary ONLY.

Homework paper assignment 6 – (10% of final grade maximum 150 words, due before class on March 9, Bullet point style is fine.)

Is the impact of user fees in developing countries consistent with the results of the RAND experiment?
Does any induced moral hazard associated with removal of user fees increase welfare or reduce it?

RUBRIC	1	2	3	4	Total possible points
Consistency with RAND	Basic finding	More connections to RAND	More connections to RAND	More connections to RAND	4
Welfare effects	Restates paper	One welfare effect	Two welfare effects	Ties to C3 framework	4
Overall	Coherent	Sophisticated argument			2

Session 7: March 9, 2022

Agency – How Should Health Professionals Be Paid?

Deliverables:

- Assignment 6 due before class!

Objectives:

- Understand the problem of agency and its application to health care
- Recognize the different ways of compensating health care providers and the incentives these generate

Readings:

- Textbook, Chapter 5, read section 5.4; skim other sections (plus the T/F questions)
- Christianson, J.B., and D. Conrad, 2011, "[Provider Payment and Incentives](#)," in Oxford Handbook of Health Economics, edited by Sherry Glied and P.C. Smith (New York: Oxford University Press). Read ONLY pp. 624-648.
- Mitchell, Jean M., 2013, "[Urologists' Use of Intensity-Modulated Radiation Therapy for Prostate Cancer](#)," New England Journal of Medicine 369(17): 1629-1637.
- Mitchell, Jean M., Jack Hadley, and Darrell J. Gaskin. "[Spillover effects of Medicare fee reductions: evidence from ophthalmology](#)." *International Journal of Health Care Finance and Economics* 2, no. 3 (2002): 171-188. Sections 1, section 3 (not math), section 6, section 7 only

FINAL EXAM posted online by 12:00pm on March 10 (THURSDAY)

FINAL EXAM due back by 11:00pm on March 13 (SUNDAY)

Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by [Wagner's Academic Code](#). All Wagner students have already read and signed the [Wagner Academic Oath](#). Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

Henry and Lucy Moses Center for Students with Disabilities at NYU

Academic accommodations are available for students with disabilities. Please visit the [Moses Center for Students with Disabilities \(CSD\) website](#) and click on the Reasonable Accommodations and How to Register tab or call or email CSD at (212-998-4980 or mosescsd@nyu.edu) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

NYU's Calendar Policy on Religious Holidays

[NYU's Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations.

Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.